RtI – A Work in Progress

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Connersville High School

Connersville High School

- Our Community
- Our Student Population
  - enrollment 1250
- Free and Reduced Population
  - 29% free, 10% reduced
- Special Education Population
  - 15 to 20%

"Response to Intervention" (RtI) is the process of :

- **providing evidence-based instruction to all students**,
- **using data to identify at the earliest opportunity the educational** and behavioral **needs of students**,
- using a multi-disciplinary, problem-solving team to assess needs and develop plans for those students in need of targeted, research-based, supplemental interventions,
- **monitoring such a student's response to those interventions**, and
- **adjusting the interventions necessary to allow the student to meet the identified learning target(s).**

Source: doe.in.gov/sservices/response-to-intervention.html

CHS School-Wide Strategies

- Nine-Reading Strategies
- Critical Writing
- Problem Solving Model
- Weekly PLC Meetings
- Dual Credit / ES Classes
- Grants – Algebra Readiness and InAccess

Our Approach to Academic Success

- Establish Freshmen Center
- Assess incoming freshmen based on data
- Develop curriculum based on IDOE Standards
- Develop common assessments based on IDOE ***Core*** Standards/Indicators
- Administer formative assessments to measure student progress and intervene as needed

Our Approach to Academic Success

- Common planning time for core subject teachers – 4 x per week, 25 min
- Release time to develop curricular materials and assessments
- Students use their data to chart growth
- Common instructional practices
  - Posting agendas, goals, goal setting activities…

The good news at CHS…

Success in Mathematics

ISTEP 10th Grade GQE

An **8% increase** from Fall 06 to Fall 07

Algebra 1 Core 40 ECA

A **17.1% increase** from Spring 07 to Spring 08

Let's put it in perspective…

10th ISTEP GQE – CHS 8% increase

	CHS % Pass	State % Pass
Fall 06	55%	66%
Fall 07	63%	67%

Sources: doe.in.gov/asap/statesnap3.html; doe.state.in.us/core40eca/06-07_state_results.html; doe.state.in.us/core40eca/07-08_state_results.html

Let's put it in perspective…

Algebra 1 Core 40 ECA – CHS 17.1% increase

	CHS 9th % Pass	State High School % Pass	State JR/Middle % Pass	State Overall % Pass
Spring 07	4.2%	18%	59%	29%
Spring 08	21.3%	21%	69%	34%

Sources: doe.in.gov/asap/statesnap3.html; doe.state.in.us/core40eca/06-07_state_results.html; doe.state.in.us/core40eca/07-08_state_results.html

Key Points

- **Provide evidence-based instruction to all students**
- Assess progress towards academic success
- Identify students in need of interventions and monitor their response
- Adjust interventions
- Use data at the earliest opportunity to identify the academic needs of students

Provide Evidence-Based Instruction to all Students

Curriculum Development Process- Algebra 1

- Build familiarity with Standards and *Core* Standards/Indicators
- Develop pacing guide
- Develop common assessments
- Write curriculum

Core Standards for English/Language Arts, Mathematics, Science, and Social Studies can be found at http://www.doe.in.gov/standards/core.html

Algebra 1 Pacing Guide

Grading Period 1	Grading Period 2	Grading Period 3
1.3.1 Sketch a reasonable graph for a given relationship. **1.3.2** Interpret a graph representing a given situation. **1.4.1** Graph a linear equation. **1.4.2** Find the slope, *x*-intercept, and *y*-intercept of a line given its graph, its equation, or two points on the line. **1.4.3** Write the equation of a line in slope-intercept form. Understand how the slope and *y*-intercept of the graph are related to the equation.	**1.4.4** Write the equation of a line given appropriate information. **1.4.5** Write the equation of a line that models a data set and use the equation (or the graph of the equation) to make predictions. Describe the slope of the line in terms of the data, recognizing that the slope is the rate of change. **1.3.3** Understand the concept of a function. Decide if a given relation is a function, and link equations to functions. **1.3.4** Find the domain and range of a relation. **1.5.1** Use a graph to estimate the solution of a pair of linear equations in two variables.	**1.5.3** Understand and use the substitution method to solve a pair of linear equations in two variables. **1.5.4** Understand and use the addition or subtraction method to solve a pair of linear equations in two variables. **1.5.5** Understand and use multiplication with the addition or subtraction method to solve a pair of linear equations in two variables. **1.5.6** Use pairs of linear equations to solve word problems. **1.4.6** Graph a linear inequality in two variables. **1.5.2** Use a graph to find the solution set of a pair of linear inequalities in two variables.
Grading Period 4	**Grading Period 5**	
1.1.4 Use the laws of exponents for rational exponents. **1.6.2** Multiply and divide monomials. **1.6.3** Find powers and roots of monomials **1.6.4** Multiply polynomials. **1.6.5** Divide polynomials by monomials. **1.6.6** Find a common monomial factor in a polynomial. **1.6.7** Factor the difference of two squares and other quadratics.	**1.6.8** Understand and describe the relationships among the solutions of an equation, the zeros of a function, the *x*-intercepts of a graph, and the factors of a polynomial expression. **1.8.1** Graph quadratic, cubic, and radical equations. **1.8.2** Solve quadratic equations by factoring. **1.8.3** Solve quadratic equations in which a perfect square equals a constant. **1.8.6** Solve quadratic equations using the quadratic formula. **1.8.7** Use quadratic equations to solve word problems.	

Curriculum – Key Elements

- Vocabulary/Common Terminology
- Student performance outcomes
- Instructional resources correlated with standards
- Instructional/Learning activities
- Formative assessments / re-teaching opportunities

Curriculum Algebra GP1

Date	Content Resources	Algebra 1 Indicators	Additional Resources
	• Text 3.3 Solving Multi-step Equations • Text 3.4 Solving Equations w/ Variables on Both Sides • Text 3.5 More on Linear Equations • Text 6.1 Solving Inequalities Using Add or Subt • Text 6.2 Solving Inequalities Using Mult or Div • Text 6.3 Solving Multi-step Inequalities	**Review Prerequisite Skills** 1.1.3 Understand and use the distributive, associative, and commutative properties. 1.2.1 Solve linear equations. 1.2.4 Solve linear inequalities using properties of order. 1.2.5 Solve combined linear inequalities.	Reteaching 1.3.3 – Accelerated Math Objective 107 1.3.4 – Accelerated Mat Objective 106 1.4.1 – Accelerated Math Objectives 69-71 1.4.2 – Acclelerated Math Objectives 59-61
	• C40 – ST 3, #1, 2, 3, 4, 5, 6 • Punchline Algebra Book A; 6.2,3,4	**1.3.1 Sketch a reasonable graph for a given relationship.**	
	• Text 1.7 Tables and Graphs • C40 – ST 3, # 2, 3, 7, 8 • Punchline Bridge to Algebra, Page 124	**1.3.2 Interpret a graph representing a given situation.**	
	• Text 1.8 Introduction to Functions	1.3.3 Understand the concept of a function, decide if a given relation is a function, and link equations to functions	
	• Text 1.8 Introduction to Functions	1.3.4 Find the domain and range of a relation.	Enrichment 1.3.1&2 – Core 40 Materials Standard 3 1-8 1.4.1,2&3 – Core 40 Materials Standard 4 – 1-12
	• Text 4.2 Graphing Linear Equations • Text 4.3 Graphing Horizontal and Vertical Lines • Text 4.4 Graphing Lines Using Intercepts	**1.4.1 Graph a linear equation.**	
	• Text 4.5 Slope of a Line • Text 4.7 Graphing Lines Using Slope-Intercept Form • Text 5.1 Slope-Intercept Form	**1.4.2 Find the slope, *x*-intercept, and *y*-intercept of a line given its graph, its equation, or two points on the line.**	
	• Text 3.7 Formulas	**1.4.3 Write the equation of a line in slope-intercept form. Understand how the slope and *y*-intercept of the graph are related to the equation.**	

Bold standards tested for mastery at end of grading period.

Lesson Planning Rubric

1	2	3	4	Rating
Unsatisfactory	**Satisfactory**	**Proficient**	**Commendable**	
Inconsistent planning for each day.	Shows planning for each day by topics.	Shows plans each day with reflections for the next.	Shows flexible, reflective plans each day, use of formative assessments.	
Inconsistent planning for each different course.	Shows planning for each course.	Shows differentiated plans for each unit of course.	Shows differentiated planning each course each day.	
Standards are not noted for each lesson or unit.	Standards are noted for each unit.	Standards are noted for each lesson.	Standards are noted for each lesson and for re-teaching w/ each unit.	
Beginning, middle and end inconsistent w/ the lesson.	Beginning, middle and end noted to each lesson.	Beginning, middle and end shows variation.	Variation, creativity in strategies for beginning, middle and end each day.	
Has 0-17 proofs of critical reading.	Has 18-27 proofs of critical reading activities.	Has 28-36 proofs of critical reading activities.	Has more than 36 proofs of critical reading activities.	
Has 0-17 proofs of critical writing.	Has 18-27 proofs of critical writing activities.	Has 28-36 proofs of critical writing activities.	Has more than 36 proofs of critical writing activities.	
Has 0-17 proofs of problem-solving.	Has 18-27 proofs of problem-solving activities.	Has 28-36 proofs of problem-solving activities.	Has more than 36 proofs of problem-solving activities.	

Key Points

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- **Assess progress towards academic success**
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Assess Progress Towards Academic Success

Common Assessments

- Developed and administered by all teachers
- Measure progress on ***Core*** standards/indicators
- Class and student results used to determine needed interventions and guide future instruction

Assess Progress Towards Academic Success

Assessment Results: Class Summary, Ranked

Date Printed: 10/11/2008

District: Fayette County	Assessment: 9 Algebra GP1 08-09 R	Assessment Date: 09/24/2008
School: Connersville High School	Subject: Mathematics	# of Students: 25
Grade(s): Grade 09	Results Period: Grading period 1	
Class/Teacher: Long, V. - ALGEBRA 1 S1 (22)	School Year: 2008 - 2009	

PART II: Average results by Standard/Course and Indicator for all students in the class

Algebra I Standard/Course A1.3 Relations and Functions		
Indicator	Number & Type of Items	Average Score
A1.3.1 Sketch a reasonable graph for a given relationship.	5 MC	72%
A1.3.2 Interpret a graph representing a given situation.	5 MC	64%
Total for: A1.3 Relations and Functions	-	68%

Algebra I Standard/Course A1.4 Graphing Linear Equations and Inequalities		
Indicator	Number & Type of Items	Average Score
A1.4.1 Graph a linear equation.	5 MC	64%
A1.4.2 Find the slope, x-intercept and y-intercept of a line given its graph, its equation, or two points on the line.	5 MC	62%
A1.4.3 Write the equation of a line in slope-intercept form. Understand how the slope and y-intercept of the graph are related to the equation.	5 MC	47%
Total for: A1.4 Graphing Linear Equations and Inequalities	-	58%

Assess Progress Towards Academic Success

Student 1

Assessment Results: Student Summary

Date Printed: 10/11/2008

District: Fayette County	Assessment: 9 Algebra GP1 08-09 R	Assessment Date: 09/24/2008
School: Connersville High School	Subject: Mathematics	
Grade(s): Grade 09	Results Period: Grading period 1	
Class/Teacher: Long, V. - ALGEBRA 1 S1 (22)	School Year: 2008 - 2009	

Student:
Total Points Earned: Total Points Possible: 25 Overall Score: 60 %

Grade 09 Standard/Course A1.3 Relations and Functions				
Indicator	Item Type	Number of Points Earned	Number of Points Possible	Percentage of Points Earned (0 – 100 %)
A1.3.1 Sketch a reasonable graph for a given relationship.	MC	4	5	80%
A1.3.2 Interpret a graph representing a given situation.	MC	1	5	20%
Standard/Course Total "A1.3 Relations and Functions"	-	5	10	50%

Grade 09 Standard/Course A1.4 Graphing Linear Equations and Inequalities				
Indicator	Item Type	Number of Points Earned	Number of Points Possible	Percentage of Points Earned (0 – 100 %)
A1.4.1 Graph a linear equation.	MC	5	5	100%
A1.4.2 Find the slope, x-intercept and y-intercept of a line given its graph, its equation, or two points on the line.	MC	4	5	80%
A1.4.3 Write the equation of a line in slope-intercept form. Understand how the slope and y-intercept of the graph are related to the equation.	MC	1	5	20%
Standard/Course Total "A1.4 Graphing Linear Equations and Inequalities"	-	10	15	67%

Assess Progress Towards Academic Success

Student 2

Assessment Results: Student Summary

Date Printed: 10/11/2008

District: Fayette County	Assessment: 9 Algebra GP1 08-09 R	Assessment Date: 09/24/2008
School: Connersville High School	Subject: Mathematics	
Grade(s): Grade 09	Results Period: Grading period 1	
Class/Teacher: Long, V. - ALGEBRA 1 S1 (22)	School Year: 2008 - 2009	

Student:
Total Points Earned:

Total Points Possible: 25

Overall Score: 44 %

Grade 09 Standard/Course A1.3 Relations and Functions				
Indicator	Item Type	Number of Points Earned	Number of Points Possible	Percentage of Points Earned (0 – 100 %)
A1.3.1 Sketch a reasonable graph for a given relationship.	MC	2	5	40%
A1.3.2 Interpret a graph representing a given situation.	MC	3	5	60%
Standard/Course Total "A1.3 Relations and Functions"	-	5	10	50%

Grade 09 Standard/Course A1.4 Graphing Linear Equations and Inequalities				
Indicator	Item Type	Number of Points Earned	Number of Points Possible	Percentage of Points Earned (0 – 100 %)
A1.4.1 Graph a linear equation.	MC	1	5	20%
A1.4.2 Find the slope, x-intercept and y-intercept of a line given its graph, its equation, or two points on the line.	MC	3	5	60%
A1.4.3 Write the equation of a line in slope-intercept form. Understand how the slope and y-intercept of the graph are related to the equation.	MC	2	5	40%
Standard/Course Total "A1.4 Graphing Linear Equations and Inequalities"	-	6	15	40%

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Assess Progress Towards Academic Success

Grading Period 1 Indicator	9/24/08	Date	Date
Student 2	Percent		
1.3.1 Sketch a reasonable graph for a given relationship	**40%**		
1.3.2 Interpret a graph representing a given situation.	**60%**		
1.4.1 Graph a linear equation	**20%**		
1.4.2 Find the slope, *x*/y intercepts of a line given its graph, its equation, or two points on the line	**60%**		
1.4.3 Write the equation of a line in slope-intercept form. Understand how the slope and *y*-intercept of the graph are related to the equation	**40%**		

Identify students in need of interventions and monitor their response

Analyze data to determine whole class instructional needs and/or group interventions

- **Standard 3**
  - Class Openers
  - Accelerated Math Objectives
  - Small group instruction during class
  - Group/individual instruction during SRT (Student Resource Time)
- **Standard 4**
  - Whole class instruction with emphasis on skills from GP1
- **Reassess student progress**

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Adjust Interventions

- After school tutoring / parental contact
- Individual help before school/SRT
- Enrollment in lab class
- Referral to 9th Grade Success Coach
- Investigation of behaviors impeding academic success

Key Points

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Use data at the earliest opportunity to identify the academic needs of students

Incoming 9th graders

- 20% of at-risk students are identified
- Data from several sources analyzed, including previous ISTEP and NWEA results
- Students placed in Math Labs and LA Labs

Language Arts Lab Procedures

- Star Reading Test
  - Assess students' instructional level according to NWEA and Star Reading Tests results
- Analyze group/individual strengths and weaknesses
- Plan group and individual instruction
- Use frequent formative assessments to check for academic growth – re-teach as needed

Language Arts Lab Procedures

An integral part of the LA Lab curriculum is Read Now Power Up (intervention program)

Unit Procedures

- Whole group instruction on a specific strategy
- Discussions crafted to aid students in development of higher ordered thinking skills, critical reading skills and writing skills
- Independent activities and assessments
- Informal assessments may lead to individualized and/or small group re-teaching sessions

Language Arts Lab Procedures

How do we know if they are succeeding?

Assessments

- End of Unit
  - All students assessed individually with on-line tests and formal essays
  - Results determine whether whole group or individualized re-teaching is needed on specific strategies
  - If individualized help is needed, student receives one-on-one instruction from teacher, both during class and outside of class

Questions?